

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for reducing sulfur content in a hydrocarbon feedstock containing sulfur, the process comprising:

(a) contacting the hydrocarbon feedstock with a Fractionation Zone to produce under catalytic distillation conditions at least Fraction (1) and Fraction (2), wherein each fraction contains sulfur, and Fraction (1) has a final boiling point that is lower than that of Fraction (2),

(b) contacting Fraction (1) with a Membrane Separation Zone, said Membrane Separation Zone containing a membrane having a sufficient flux and selectivity to separate a sulfur-enriched permeate fraction and a sulfur deficient retentate fraction, and said sulfur enriched permeate fraction being enriched in sulfur compared to Fraction (1);

(c) recovering the sulfur deficient retentate fraction;

(d) contacting said sulfur enriched permeate fraction of (b) and said Fraction (2) of (a), separately or as a combination, with a Desulfurization Zone to reduce the sulfur content of the sulfur enriched permeate fraction and Fraction (2); and

(e) recovering a hydrocarbon stream from the Desulfurization Zone wherein the hydrocarbon stream has a reduced sulfur content, relative to the sulfur-containing feedstock.

2. (Original) A process according to Claim 1 wherein the membrane in (b) comprises a member selected from the group consisting of polyimide, polyurea-urethane, polysiloxane and combinations thereof.

3. (Original) A process according to Claim 1 wherein the membrane in (b) comprises a polyurea-urethane.

4. (Original) A process according to Claim 1 wherein the hydrocarbon feedstock is a naphtha feed.

5. (Original) A process according to Claim 4 wherein the naphtha feed contains at least 150 ppm sulfur.

6. (Original) A process according to Claim 4 wherein the naphtha feed is an effluent from a fluidized catalytic cracking unit.

7. (Canceled)

8. (Original) A process according to Claim 1 wherein Fraction (1) has a final boiling point in the range of about 50°C to about 200°C.

9. (Original) A process according to Claim 1 wherein Fraction (1) has a final boiling point in the range of about 50°C to about 130°C.

10. (Original) A process according to claim 1 wherein Fraction (1) contains sulfur-containing aromatic hydrocarbons.

11. (Original) A process according to claim 8 wherein Fraction (1) contains sulfur-containing aromatic hydrocarbons.

12. (Original) A process according to claim 4 wherein Fraction (1) contains sulfur-containing aromatic hydrocarbons.

13. (Currently Amended) A process according to ~~claim 7~~claim 1 wherein Fraction (1) contains sulfur-containing aromatic hydrocarbons.

14. (Original) A process according to Claim 10 wherein Fraction (1) contains thiophene or alkylthiophene.

15. (Original) A process according to Claim 11 wherein Fraction (1) contains thiophene or alkylthiophene.

16. (Original) A process according to Claim 12 wherein Fraction (1) contains thiophene or alkylthiophene.
17. (Original) A process according to Claim 13 wherein Fraction (1) contains thiophene or alkylthiophene.
18. (Original) A process according to Claim 17 wherein Fraction (1) is substantially free of mercaptan-containing compound.
19. (Original) A process according to Claim 1 wherein Fraction (2) contains a member selected from the group consisting of benzothiophene, alkylbenzothiophene, and thioethers.
20. (Original) A process according to Claim 1 wherein the sulfur deficient retentate fraction of step (b) contains 70 ppm or less sulfur.
21. (Original) A process according to Claim 1 wherein the Membrane Separation Zone operates under pervaporation conditions.
22. (Original) A process according to Claim 1 wherein the membrane has a sulfur enrichment factor of at least 1.5.
23. (Original) A process according to Claim 1 wherein sulfur deficient retentate fraction of (b) is transferred as a gasoline blend stock.
24. (Original) A process according to Claim 1 wherein the Desulfurization Zone of (d) operates under hydrodesulfurization conditions.
25. (Original) A process according to Claim 1 wherein the Desulfurization Zone of (d) operates under catalytic hydrodesulfurization conditions.

26. (Original) A process according to Claim 25 wherein the sulfur content of reduced sulfur-containing hydrocarbon streams from the Desulfurization Zone in (f) is 50 ppm or less sulfur.